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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/757,917 | 01/10/2001 | Anu Virtanen | 297-010018-US(PAR) | 8318 |

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EXAMINER

WONG, BLANCHE

| ART UNIT | PAPER NUMBER |
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2667

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/757,917

Applicant(s)

VIRTANEN, ANU

Examiner

Blanche Wong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12, 13 and 15-23 is/are rejected.
- 7) ☒ Claim(s) 10, 11, 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 10, 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date #4-7.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Specification***

1. The abstract of the disclosure is objected to because there are miscellaneous words: – (57) – appears before the Abstract heading, -- Figure 3. – appears after the paragraph. Applicant is reminded that the Abstract should point out the specific(s) of the invention and not written in claim language or as a research paper. Applicant is reminded of the proper language and format for an abstract of the disclosure.
2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use. Applicant is reminded that the Specification should explain the specific(s) in aid of understanding the invention and not written as a research paper. For example, references [1] and [2] of pg. 17 should be removed or incorporated into the Specification.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

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- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Correction is required. See MPEP § 608.01(b).

3. Claim 1-23 is objected to because of the following informalities: extra words. Appropriate correction is required.

In claim 2, ln. 1, the word – following – is rhetorical when used with "further".

In claim 3, ln. 1, claim 4, ln. 1, claim 8, ln. 3, claim 9, ln. 1, the word – in – is rhetorical after "wherein".

In claim 5, ln. 6, the word – substep – is rhetorical after "wherein the step ... comprises ..."

In claim 7, ln. 2, the words – following – and – substep – are unnecessary. See reasons in claim 2 and 5.

Applicant is advised to review all other claims for similar informalities as above.

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In claim 20, ln. 2, after the first means-for limitation and before the second and means-for limitation, the word – and – is inappropriate because it is not yet at the end of the means-for series.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claim 5-9,12,13**, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claims 6,7,13, it is unclear what is meant by “the amount of coded data transmitted in the first and in the second frames corresponds to a certain fixed amount of original data.” Hence, it is difficult to comprehend the technical essence of claims 7 and 13, reciting “puncturing the coded data transmitted in the second frames so that the amount of coded data transmitted in the first and in the second frames corresponds to a certain fixed amount of original data.”

With regard to claims 8 and 9, claim 9 recites “the transmission gap having a first duration occurs during two sequential frames” and “the transmission gap having a second duration occurs within one frame”. However, claim 8, which claim 9 are dependent, recites “said transmission gap having the first duration” and “said transmission gap having the second duration”. It is

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unclear whether the transmission gap is identical to said transmission gap because it is unclear whether a first duration is identical to the first duration, and a second duration is identical to the second duration.

With regard to claim 12, it also recites "the transmission gap having the first duration" and is dependent on claim 8. Therefore, claim 12 has similar problem as claim 9. See reason for claim 9.

With regard to claim 12, it is also unclear what is meant by "substantially half of the transmission gap having the first duration occurs during in the previous frame of said two subsequent frames" because it is unclear in which part of a frame substantially half of the transmission gap occurs.

6. Claim 5 recites the limitation "first frames" in ln. 3 and "second frames" in ln. 6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. ⁴¹**Claims 1-5, 15-20, 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Voyer et al. (U.S. Pat No. 6,469,995) in view of Mitsubishi (EP 0 984 581)(as provided by Applicant).

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With regard to claims 1,17, 20,22, Voyer discloses a method for preparing an interfrequency handover (between UMTS and another system such as GSM; see also MAHO and NAHO, col. 1, ln. 51-53) of a certain communication connection from a first frequency to a second frequency (handover between different carrier frequencies, col. 1, ln. 31-32), said method comprising the following steps of:

periodically intermitting (col. 18, ln. 64-65; it is inherent in compressed mode that frames of info are intermittent or periodic; see also Fig. 2, 3c, 6c) the transmission/receipt of data on the first frequency for certain transmission gaps (col. 18, ln. 64-65; it is inherent in compressed mode that there are gaps between transmission of frames of info; see also Fig. 2, 3c, 6c), where the number of transmission gaps is at least one during each transmission period (see also Fig. 2, 3c, 6c), a certain sequence of transmission periods is used, and at least one transmission period has a transmission gap having a first duration and a second transmission gap having a second duration (col. 17, ln. 66-col. 18, ln. 1), and periodically measurements (col. 17, ln. 26-31) on the second frequency during the transmission gaps on the first frequency,

as recited in claim 1.

However, Voyer fails to explicitly show second duration is different from the first duration, as recited in claim 1.

Mitsubishi discloses that the number of frames can varies according to the length of the idle period (para. [0267], ln. 13-15). Hence, idle periods can have variable idle periods, and first and second duration can be different.

A person of ordinary skill in the art would have been motivated to employ Mitsubishi in Voyer in order to obtain a first duration that is different from a second duration. The suggestion/motivation to do so would have been to provide for prevention of signal quality deterioration by compressed mode and thus minimization of the effects of transmission errors. Mitsubishi, para [0015], ln. 1-8. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Mitsubishi and Voyer to obtain the invention as specified in claims 1 and 17.

With regard to claims 2 and 18, Voyer further discloses the step of receiving system information on the second frequency during a transmission gap on the first frequency, col. 17, ln. 38-40 (see also measurement of claim 1), as recited in claim 2.

With regard to claim 3, Voyer further discloses all the transmission periods (superframe, Fig. 3c and 6c; see also col. 13, ln. 51-col. 14, ln. 11 and col. 14, ln. 55-col. 15, ln. 45) are identical from the beginning of the first transmission gap within a transmission period to the end of the last transmission gap within the same transmission period.

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With regard to claim 4, Voyer further discloses a certain number of transmission periods is repeated cyclically (there are two superframe shown, Fig. 3c and 6c; see also col. 13, ln. 51-col. 14, ln. 11 and col. 14, ln. 55-col. 15, ln. 45).

With regard to claims 15 and 16, Mitsubishi further discloses two transmission periods having different durations, or all transmission periods can have the same duration. Para. [0267], ln. 13-15.

With regard to claims 17,20,22, Voyer further discloses a mobile station comprising:

means for receiving 2 (receiver, Fig. 8) data on a first frequency (receiver is receiving on different frequencies),

means for receiving information about the durations of at least two transmission gaps (transmission in between two superframes, Fig. 3c and 6c), as recited in claim 17.

With regard to claim 19, Voyer further discloses a UMTS mobile station. Col. 1, ln. 17.

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9. **Claims 21 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Voyer and Mitsubishi as applied to claims 1-5,15-20,22 above, and further in view of Park et al. (U.S. Pat No. 6,498,933).

With regard to claims 21 and 23, the combination of Voyer and Mitsubishi discloses a network element according to claim 20 and 22 respectively.

However, the combination fails to show expressly a base station and RNC of the UTRA network.

Park disclose a base station and RNC of an UTRA network 22 (col. 1, ln. 31-34) for inter-frequency/inter-system handover.

A person of ordinary skill in the art would have been motivated to employ Park in the combination of Voyer and Mitsubishi in order to obtain a UTRA network with a base station and RNC. The suggestion/motivation to do so would have been to provide for communication in a compressed mode. Park, col. 1, ln. 53. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Mitsubishi and Voyer to obtain the invention as specified in claims 21 and 23.

Allowable Subject Matter

10. **Claims 10,11,14** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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11. **Claims 5-9,12,13** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Alexandre (U.S. Pat No. 6,501,744) discloses a slotted mode in wireless CDMA systems where there are a leading frame portion preceding the slot, and a trailing portion succeeding the slot.

Dahlman et al. (U.S. Pat No. 5,883,899) discloses a code-rate increased compressed mode DC-CDMA systems and method, where an idle part of the frame performs other functions.

Dahlman et al. (U.S. Pat No. 5,896,368) discloses a multi-code compressed mode DS-CDMA systems and method, where a frame duration is defined as a duty cycle, when information is transmitted during a portion of the frame period.

Willars et al. (U.S. Pat No. 5,533,014) discloses a non-continuous transmission for seamless handover in DS-CDMA systems that combines both Dahlman's features.

Willars et al. (U.S. Pat No. 6,597,679) discloses a control of compressed mode transmission in WCDMA, where slot duration can be controlled.

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Lehtinen et al. (U.S. Pat No. 5,532,226) discloses a method and arrangement for optimal scheduling of slotted-mode related measurements.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BW

BW
August 19, 2004



KENNETH VANDERPUYE
PRIMARY EXAMINER